



DIGITAL
HEALTH & CARE
INSTITUTE

"...everyone in
healthcare really has
two jobs when they
come to work every
day: to do their work
and to improve it."

REVOLUTIONISING
THE OUTPATIENT
EXPERIENCE

Acknowledgements

We would like to thank NHS Lothian and participants for giving up their valuable time to participate in the Exploratory Event. We would also like to thank the team at Scottish Health Service Centre Event Team and the staff at Edinburgh International Climbing Centre, Ratho.

Disclaimer

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DHI is one of eight innovation centres, which are part of the Scottish Funding Council's long term investment programme to accelerate growth in key industries.

DHI will draw together the expertise that is at its core, across medicine, design, business and informatics to create innovative and transformational solutions to health and social care delivery through our 'Explore, Experience, and Exploit' approach.

Throughout all three activities we will build capability and expertise in digital health and care and embed innovations and new ways of working through an engaged and integrated approach to ensure sustainable innovation and provide economic stimulation and growth.



EXECUTIVE SUMMARY

The Digital Health & Care Institute facilitated a two day exploratory event 'Revolutionising the Outpatient Experience', jointly with NHS Lothian in Edinburgh March 30-31 using DHI's Experience Lab methodologies.

Outpatient care has not changed significantly either in Scotland or across the UK since the creation of the NHS in 1948. Scotland is in the process of reviewing models and good practice in outpatient care worldwide in order to collect international evidence to improve the service. The approach followed in this exercise and the overall process is aligned with many health policy agendas worldwide. The first day of the event focused on mapping out the current situation in outpatient care in Scotland and on producing a shared understanding of the current challenges and opportunities by drawing upon the knowledge and experience of the international panel of experts.

The second day focused on how technology could be used to improve the delivery of outpatient care in order to achieve a person centred experience and more efficient and effective use of the available resources.

The day was facilitated using DHI's unique Experience Lab methodologies to stimulate debate and generate new ideas among the large group of participants from a variety of sectors, such as the NHS, academia, social work, charities, as well as patients and their carers.







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REVOLUTIONISING THE OUTPATIENT EXPERIENCE AGENDA

Monday March 30 2015

Tuesday March 31 2015

Registration	9:00	Registration
Welcome <i>Pennie Taylor</i> <i>Jim Crombie, NHS Lothian</i> <i>Justene Ewing, DHI</i> Keynotes: Scotland's Challenge & Opportunity <i>Brian Robson,</i> Healthcare Improvement Scotland What matters to you? <i>Audrey Birt, Birt Associates</i>	9:30	Welcome <i>Pennie Taylor</i> Keynote: DHI Innovation <i>Don McIntyre,</i> Institute of Design Innovation Introducing the key themes
Coffee break	10:50	Coffee break
Implementation of Outpatient Care in Catalonia <i>Silvia Cordoní,</i> Catalan Institute of Health (ICS)	11:20	Revolutionising the Outpatient Experience <i>Group activity (1)</i>
Lunch	12:30	Lunch
Mapping the Outpatient Experience <i>Group activity</i>	13:30	Revolutionising the Outpatient Experience <i>Group activity (2)</i>
	14:30	Coffee available
Coffee break	15:15	Revolutionising the Outpatient Experience <i>Group activity (3)</i>
Discussion and wrap-up	15:45	Discussion and next steps
	16:30	Closing address <i>John Matheson,</i> Scottish Government
Close of day 1	17:00	Close of day 2
<i>DHI Sponsored:</i> Evening Reception and Conference Dinner <i>The George Hotel</i>	18:00	
	21:00	

ongoing **Interactive Activity:** The Ideal Outpatients Experience
 Share and prototype your ideas



PROJECT BACKGROUND

Annually, hundreds of thousands of people across Scotland receive advice, health monitoring and medical care through the delivery of outpatient services. The basic model of delivery for these services has remained relatively unchanged since the NHS was founded in 1948. The need to change the way outpatient services is delivered within Scotland, which is supported by a number of factors, such as changes in demographics and the improvements in treatment of illnesses. These mean that people live longer with more long term conditions, which increases the demand faced by the current outpatient care provision.

Scotland is going through a process of reviewing models and good practices in outpatient care delivery worldwide. As part of this process, NHS Lothian together with the Digital Health & Care Institute (DHI) arranged a two-day event '**Revolutionising the Outpatient Experience**', which took place at the Edinburgh International Climbing Arena (EICA), Ratho, Edinburgh on March 30 and 31 2015. Delegates from academia, industry, the voluntary sector and a variety of civic backgrounds were invited to attend the two-day event to explore and envision opportunities that digital technology could offer for innovative and improved delivery of outpatient care.

The Digital Health & Care Institute

The Digital Health & Care Institute (DHI) is an Innovation Centre, which aims to enable Scotland to scale health and care services, adopt existing technologies and create new innovative technologies to meet current and future demographic challenges. Drawing on the expertise of core partners in medicine, design, business and informatics, DHI stimulates the creation of innovative and transformational solutions to health and social care delivery.

Experience Lab methodology

A core aspect of DHI is the concept of the Experience Lab, which is developed and led by DHI team at The Glasgow School of Art (GSA). Experience Labs provide an environment where users, businesses and researchers can collaborate to respond to health and care challenges in an agile and iterative manner. Experience Labs use current and emerging design practices to build environments, which replicate real life practice. In doing this they provide a safe, creative and innovative space where rapid cycles of experience can trial new technology, services, processes and behaviours.





PRE-EVENT ENGAGEMENT EXERCISE

To base the two-day event in evidence from the field, DHI carried out a pre-lab engagement exercise. This entailed interviewing a number of key members of the NHS Lothian Corporate Improvement Directorate team and handing out questionnaires to outpatient service users in order to explore patient expectations prior to appointment, satisfaction with the service and ideas for improvement. In addition, a separate online link to the questionnaire was sent to all prospective participants of the event. The key insights and challenges identified in the exercise and used as a basis for the two days of workshops are listed below.

Key insights:

1. The many different specialisms, people, places and processes that combine to form outpatient services make it a highly complex system. As a result it is very difficult to see the 'big picture'.
2. There is a need to revolutionise the outpatient services delivery across Scotland to meet increasing demand.
3. A wealth of great ideas for improving outpatient services exists, but there is a lack of a) a shared best practice and b) capacity (both economic and social – no time, no "head space") to implement changes.



Challenge 1

To empower outpatient service users to:

1. Achieve their desired outcome.
2. Be able to attend their appointment and reduce prevalence of did not attend (DNA).
3. See the relevant member of clinical team at an appropriate location for them.
4. Have the choice of alternative forms of care.
5. Reduce the pressures and challenges associated with waiting times and transport.
6. Be informed about the progress of their care plan (what is happening and where they currently are within the system).

Challenge 2

Enable the staff to:

1. Maintain the quality of consultations whilst meeting targets.
2. Improve communication between different services and contribute to the integration of different services.
3. Improve communication with patients and their carers.

Challenge 3

Create capacity in the system to ensure:

1. Patients gain timely access to appropriate medical personnel.
2. Efficient use of resources within the health service.
3. Consideration of alternative forms of care.
4. Time and space for the staff to implement change.
5. Time and space for implementation of system level changes while remaining focussed on meeting targets.

Revolutionising the Outpatients Experience
Exploratory Event: Engagement Questionnaire



Question 1:
What did you hope to get out of your appointment today? (Tick as many boxes as apply)

- | | |
|---|--|
| <input type="checkbox"/> Information and advice | <input type="checkbox"/> Tests/diagnostics |
| <input type="checkbox"/> Test results | <input type="checkbox"/> Scheduled check-up |
| <input type="checkbox"/> Reassurance | <input type="checkbox"/> Not sure/don't know |

Other:

Thank you for taking some time to tell us about your experience today.
Your thoughts and ideas will help us to inspire an event which will explore ways of revolutionising the outpatients experience.
This survey is anonymous and no personal details are requested.

Question 1:
What did you hope to get out of your appointment today? (Tick as many boxes as apply)

- | | |
|---|--|
| <input type="checkbox"/> Information and advice | <input type="checkbox"/> Tests/diagnostics |
| <input type="checkbox"/> Test results | <input type="checkbox"/> Scheduled check-up |
| <input type="checkbox"/> Reassurance | <input type="checkbox"/> Not sure/don't know |

Other:

Question 2:
Did you get what you needed from your appointment?

- Yes No

Comments:

Question 3:
Is there any other way your needs could have been met that would make this experience better for you?

- Yes No

Comments:



REVOLUTIONISING THE OUTPATIENT EXPERIENCE DAY 1

- ACTIVITIES AND MAPPING

The three key insights and the challenges identified in the research were used as a basis for the ideation sessions to inspire discussion and envisioning of the future of the outpatient care. In addition, participants heard three keynote speeches by outstanding specialists in their respective areas: Dr Brian Robson from the NHS gave a presentation on the challenges and opportunities facing outpatient care service in Scotland. He highlighted four key messages: that the nature of health care work would change; that the current working culture was one of the key challenges; that working in health care was about team work and about people; and that the advances in digital technology have the opportunity to improve the quality of the service. Audrey Birt, Chair of Health and Social Care Alliance Scotland (the ALLIANCE) until December 2014 and is the Associate Director of the Health and Social Care Academy, emphasised that change is not top-down, but something that is co-produced by all the different participants in outpatient care: the professionals, the system and the service users. Silvia Cordomi from the Catalan Institute of Health (ISC) presented a case study of improving the outpatient care through streamlining health services and the adoption of the electronic patient record.



Mapping the outpatient experience

INSIGHT ONE

The many different specialisms, people, places and processes that combine to form outpatient services, make it a highly complex system. As a result it is very difficult to see the 'big picture'.

The aim of day one was to map the current outpatient experience from the perspective of clinicians, administrative staff and patients. The purpose of the exercise was to form a shared understanding of the current situation and to identify elements to retain ("highpoints") and opportunities for improvement prior to the brainstorming activity on day two.

Method

A mapping activity requiring participants to consider their experience of using or delivering outpatient services to illustrate the current process was designed. Participants were split into 12 groups, each with a mix of health professionals, administrators and people who use outpatient services. Each group was provided with a completed patient questionnaire collected during our pre-engagement work at outpatient clinics and asked to use the questionnaire as inspiration to depict how the patient in the example would engage with the system.

A large printed map was laid out for each group, with the key stages of the outpatient experience printed horizontally along the top and the three key people playing a role (person using the service, admin staff, and healthcare staff) in the experience, printed vertically.

Participants were asked to use colour coded scenario cards to develop the story, sticking

Identified elements to retain:

Outpatient	Admin staff	Clinician
Receiving the appointment letter	Electronic referral system for appointments	Electronic referral system for appointments
Undertaking any required tests prior to appointment		High quality information from the GP with the referral
The actual appointment		'Teach Back' method

them onto the map. The cards included illustrations and space to describe what was taking place. Speech and thought bubble Post-it notes were provided to allow participants to add more details.

Finally, the participants highlighted the high points in the experience using gold star stickers and identified opportunities for improvements to the experience using red circular stickers.

Highpoints

Patient perspective

The appointment letter was considered to be of high value by patients because it offered them certainty and reduced anxiety associated with waiting. For some, the speed with which they received an appointment exceeded their expectations. In one experience map 'patient focused booking' was available and this was a highpoint for the patient as they could choose an appointment at a time convenient to them.

Undertaking any tests required prior to the appointment to reduce delays was seen to be of value, especially where this could be undertaken locally without the need to travel to the hospital.

The outpatient appointment was seen as a positive moment, with the opportunity to ask questions and talk to the expert health professional to understand their condition. The importance of a friendly doctor, making eye contact and reassuring the patient was highlighted.

Admin staff perspective

The ability to use the electronic system to enter referrals and allocate appointments quickly and efficiently was highly valued. This included the ability to see the first available appointment from a pooled list and also the ability to choose a named clinician, where necessary.

Clinician perspective

Clinicians also valued the IT system for electronic referral, and appreciated when GPs included high quality information with the referral. Information was also valued by GPs making referrals, for example, a highpoint for GPs was access to information provided by Macmillan for possible cancer patients. The 'Teach Back' method of verifying understanding during a consultation was seen as a highpoint for the clinician.

Opportunities for improving the experience:

Outpatient	Admin staff	Clinician
More information about the appointment is required at the point of referral.	Keeping patient records updated	Missing or incomplete patient records (electronic or paper based; incomplete patient information from GPs)
Avoiding assigning unnecessary appointments	The lack of flexibility in the appointment system	The practice of overbooking appointments
Parking at hospitals and health centres	Triage	Having to work in different locations during the same day without time allocated for travel
Rescheduling appointments should be made easier		
Scheduling to have any tests required taken in advance of the appointment to ensure the clinician has all the necessary information.		

Patient perspective

The period following referral prior to receiving an appointment letter was seen as a low point for many people who may be worried about their symptoms, nervous about the appointment and uncertain about what to expect. For some people the GP did not fully explain the reason for the referral which created confusion and worry. More information is required at the point of referral.

Unnecessary appointments were regarded as inconvenient to patients; for example, the requirement for a six month check-up or the requirement to attend a GP in order to receive a prescription following an outpatient appointment.

Parking was highlighted as difficult and frequently expensive.

When allocating an appointment, sufficient notice should be provided for an appointment and take into account the patient's circumstances. Rescheduling appointments should be made easier and more information should be provided in the appointment letter, for example, how long the appointment will last.

For some people the outpatient appointment did not result in a diagnosis and further tests were required, resulting in frustration and continued worry. Where possible, any tests required should be scheduled in advance of the appointment to ensure the clinician has all the information required.

Admin staff perspective

Missing or incorrect patient records were highlighted as an issue, leading to delays and appointment letters being sent to the wrong address.

The lack of flexibility in the appointment system also caused problems for administrative staff.

Triage was most frequently highlighted as a low point in the experience map due to delays with both paper-based triage and electronic systems.

Clinician perspective

The electronic system for viewing and triaging patient records was seen to be slow and unreliable. Where paper-based systems

are used, notes frequently go missing or are not available due to staff shortage. Poor quality information supplied by the GP at referral results in more work and unnecessary appointments.

The practice of overbooking appointments is stressful for the clinicians and results in less time to explain procedures to patients and read case notes prior to appointments resulting in a lack of care continuity. In addition, clinicians may be scheduled to work at different locations in the morning and afternoon without any travel time in between further reducing time available to see patients.





REVOLUTIONISING THE OUTPATIENT EXPERIENCE DAY 2

- ACTIVITIES AND KEY THEMES

The aim of the second day of workshops was to explore the key challenges for revolutionising the outpatient experience by gathering insights and ideas from participants.

INSIGHT TWO

There is a need to revolutionise the way outpatient services are delivered in NHS Lothian and across Scotland to meet increasing demand. New and innovative approaches are sought from all stakeholders, including academics, businesses, those who use outpatient services and NHS staff.

Challenge 1: How can we empower people who use outpatient services?

Challenge 2: How can we enable staff?

Challenge 3: How can we create capacity in the system?

Method

A brainstorming session was held with participants from a mix of backgrounds, working through a discussion of a) insights, b) assets, c) opportunities and d) next steps for each of the three challenges. The dialogue was recorded on colour coded Post-it notes. At the end of the session participants were asked to prioritise the opportunities identified, pulling out the: 1) high impact 2) quick wins and 3) longer term changes and present back to the whole group.

The Post-it notes from the discussion were thematically analysed. Five key themes emerged, with three underlying themes that cut across all the five key themes. Specific

ideas and opportunities were extracted and combined with the outputs of the idea lab (see page 16) and are presented below.

Findings

The five key themes:

1. Empowered and well informed patients
2. Personalised care
3. Using existing resources differently
4. Simplified and unified service
5. Empowered and integrated staff

1. Empowered and well informed patients

- Providing patients with more control
- Increasing patients' responsibility and ability to self-manage:
 - Encourage patients to feedback about their experiences
 - Support groups based on conditions
 - Health literacy (system and health)
- Managing patient expectations and communication:
 - Ensuring patients have access to reliable and trusted information, including access to their personal health records

2. Personalised care

- There is a need to understand the patient and tailor care accordingly (one size does not fit all):
 - Appropriate care for the person at the right time, place and with the right clinician
 - Choice of communication methods for patients and staff (face-to-face, paper-based, electronic, Skype/video conference)
 - Choice of how patients access services, for example transport, location, face-to-face or using technology (e.g. Skype/VC)

3. Using existing resources differently

- There is a need to consider alternatives to hospital-based outpatients, where appropriate, including voluntary sector resources, virtual clinics, primary care locations, community resources. Outpatients is not a building, but a mode of treatment.
- Appropriate use of technology to support delivery of services
- Adapting existing technology and systems rather than always developing something new

4. Simplified and unified service

- Reduce complexity and standardise what is standardisable:
 - Reduce opportunities for things to go wrong, i.e. remove unnecessary differences across the system that do not impact on person-centred care
 - Consider flatter management structures
 - Create simplified channels into the system
 - Transparency and consistency across the service
- There is a need for universal IT systems and processes across Scotland
 - Shared purpose
 - Centralised patient records
 - Streamlined triage

5. Empowered and integrated staff

- Training and using skills appropriately:
 - Shadowing, best practice across all levels of care
- Communication:
 - Using patient feedback to improve services
- Motivation and job satisfaction:
 - Staff are driven by quality of care, not targets
 - Workload, breathing space, protected time
 - Permission to change

From these detailed findings, three clear underlying themes emerged:

1. Technology - a wealth of specific ideas about new and existing applications of technology
2. Information and communication - availability of clear, consistent and trusted information
3. Culture - creating a culture that provides the right conditions for change was acknowledged as important to all key themes.





ACTIVITIES - IDEA LAB (ONGOING)

INSIGHT THREE

There are lots of great ideas out there that have not been implemented due to capacity issues (both system capacity and staff “headspace” to implement change) and a lack of communication of best practice.

The aim of the exercise was to create a space for the participants to share ideas already in existence, and to inspire and allow for the prototyping of new ideas for revolutionising outpatient services.

Method

An ‘Ideal Outpatients’ ideas lab was created as an ongoing activity throughout the event. Participants were invited to use idea cards to record an idea, with facilitators on hand to ask questions and where appropriate mock-up a prototype using materials provided. Several backdrops were created in the space, including a GP consultation room, a home area and a reception desk.

What if...

Tell us about your idea
What challenge does this help to solve?
Is there somewhere this has worked before?
Add your name to the back if you would be happy to talk to us about this idea.

We should try...

Tell us about your idea
What challenge does this help to solve?
Is there somewhere this has worked before?
Add your name to the back if you would be happy to talk to us about this idea.

If it were magic it could...

Tell us about your idea
What challenge does this help to solve?
Is there somewhere this has worked before?
Add your name to the back if you would be happy to talk to us about this idea.

Findings

Content from the ideas cards were added to the ideas/next steps identified during the brainstorming activity. Opportunities considered to be quick wins were highlighted and the remaining ideas were mapped along key stages in the outpatient experience. The ideas were also grouped into the five key themes identified in the brainstorming activity.

The five key themes:

1. Empowered and well informed patients
2. Personalised care
3. Using existing resources differently
4. Simplified and unified service
5. Empowered and integrated staff

1. Ideas/quick wins (all relate to theme 1)

- Ask patients why they did not attend (DNA)
- Invite patient representatives to departmental and board meetings
- A large scale consultation with patients around how they would revolutionise outpatient's using videos and stories which depict possible alternative scenarios
- Make understanding the NHS part of the school curriculum
- Free Wi-Fi at hospitals

2. Expectations

From referral/pre-appointment

- Review the information provided to GPs about the different outpatient services (using the existing IT system currently used for referral), so that GPs are able to inform the patient more comprehensively on referral (themes 4 & 5)
- Review information provided to patients along with appointment letters (themes 1 & 2)

- Include a space in the appointment letter for patients to write down any questions they have prior to attending an appointment (themes 1 & 2)
- Use visual communication to explain the service delivery or process to patients in a familiar and coherent way. For example, a subway map indication getting from point a to b, parcel tracking detailing the progression of your delivery, Dominos pizza delivery outlining progression in real time applications tracker (theme 1)
- Create an online video for each clinic to show location, access information and information on what to expect from the appointment (themes 1 & 2)

3. At arrival for the appointment

- An interactive swipe board could be positioned in the waiting area to communicate waiting times and the patient's position in the queue. Information would be accessible remotely to warn of delays – similar to airport information boards/websites/apps (themes 1 & 2).
- The reception area should promote and support health, with bigger adequate spaces, interactive technology to learn about your condition, art installations to reduce stress, alternative therapists, and volunteers from third sector/community groups and seating that encourages people to talk to each other (themes 1, 2 & 3).

4. At the appointments

- Encourage clinicians to make their first question: What are you hoping to get from today's appointment? 'What matters to you? How are you coping? (Themes 1 & 2).
- A mobile outpatient clinic to go to the patient's home (theme 2).
- Using speech/voice enabled input methods

to reduce data entry during the consultation and increase patient/clinician face to face interaction (theme 5).

5. Outcome of the appointment

- Rolling out the "Teach Back" approach to verify that the person has understood the information received during the appointment (themes 1 & 2).
- Summary sheet/postcard/app provided to the patient at end of appointment to explain outcome (themes 1 & 2).
- Stop offering automatic follow up appointments unless the patient has to be monitored - discharge patients (theme 2).
- Development of middleware to allow patient/consumer monitoring of technology to interface with NHS systems (theme 3).
- Design an IT system to allow a customised front end to handle variations across different clinical departments, using the same unified back end system. (modularity and interoperability of IT systems) (themes 4 and 5).
- Elect local (staff) champions for innovation (theme 5).
- Implement virtual meetings, where a consultant is available to answer queries from GPs (theme 5).



Next Steps

Based on the key insights gained from 'Revolutionising the Outpatient Experience' event, DHI hosted 'A Scottish Ecosystem for Innovation: Technology & Outpatients Services' on April 28 2015. The Scottish Ecosystem for Innovation is formed by DHI, the ALLIANCE, Joint Improvement Team, eHealth, NHS, NHS24 and the Scottish Centre for Telehealth and Telecare. The Ecosystem is aimed at bringing leaders from industry, academia, health and social care together to understand the challenges faced within health and social care and how it can be improved through new innovations, technologies and collaborations.

A Scottish Ecosystem for Innovation: Technology & Outpatients Services had delegates raise and address the challenges and the need for new technologies to be developed within outpatient services. A call for innovation was released to invite ideas and proposals focusing on the outpatient redesign. The DHI Call for Innovation: Outpatients Redesign closed on September 17 2015 and the response included eight applications and a further ten notes of interest or capability.

DHI is now undertaking the analysis process of the response to determine a draft programme of work, forming collaborative project work where necessary. This analysis was presented at a briefing and networking event on November 25 2015, with a view to those noting interest or capability of being integrated into existing or new applications in support of this programme of work.

The DHI then aims to undertake, fund and facilitate project work from the Spring of 2016 to demonstrate a range of technologies in support of outpatients redesign across Scotland.





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